

Understanding Legal Use Cases for Web Archives

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[IIPC Web Archiving Conference](#)
16 June 2017

“Libro” by Paolo Tonon under [CC BY-SA 2.0](#)

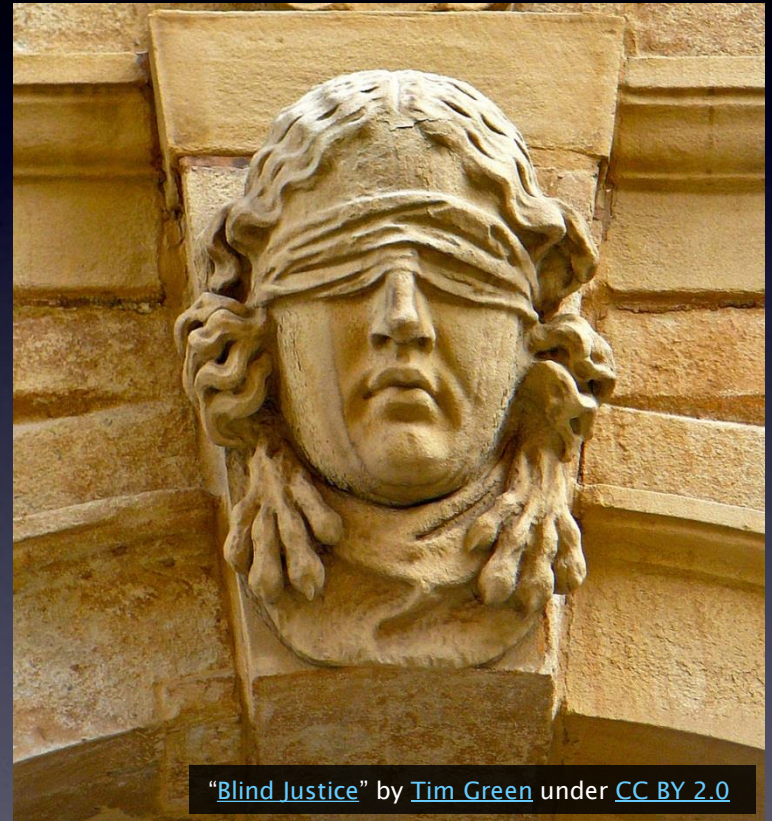
overview

- context
- relevant rules
- example cases
- reliability factors
- what next?



out of scope

- preservation of web citations
- terms of service + API agreements for social media data collecting
- copyright, fair use, + legal deposit
- right to be forgotten



["Blind Justice"](#) by [Tim Green](#) under [CC BY 2.0](#)

A topographic map of a mountainous region, likely in the Pyrenees, showing contour lines, rivers, and various peaks. A red rope is draped across the map, and a compass is visible in the upper right corner. The word "CONTEXT" is overlaid in a black box with white text.

CONTEXT

"Pics" by Dani Armengol Garreta under CC BY-NC 2.0

why web archives?

- where the data is
- organizations slow to incorporate web assets in records management
- prospective records management can't manage what's already lost



evidence from the web

*“While some look to the Internet as an innovative vehicle for communication, the Court continues to warily and wearily view it largely as **one large catalyst for rumor, innuendo, and misinformation**...Anyone can put anything on the Internet. **No web-site is monitored for accuracy**...Moreover, the Court holds no illusions that **hackers can adulterate the content on any web-site** from any location at any time. For these reasons, any evidence procured off the Internet is **adequate for almost nothing**...Instead of relying on the **voodoo information** taken from the Internet, Plaintiff must hunt for hard copy back-up documentation in admissible form”*

[St. Clair v. Johnny's Oyster & Shrimp, Inc.](#), 76 F. Supp. 2d 773 (S.D. Tex. 1999)

trends for IAWM evidence

- cases w/ IAWM evidence as early as 2004
- litigants routinely challenge IAWM evidence
- courts often accept IAWM evidence
 - commonly w/ IA affidavit or testimony
 - increasingly through judicial notice
 - sometimes w/ expert testimony
- evolving understanding of web archive reliability factors

IA affidavit guidance

Do I really need an affidavit from the Internet Archive?

No. Please consider alternatives to an affidavit from the Internet Archive. Judicial notice and stipulation to a document's authenticity are two typical and straightforward options that might be used instead of an affidavit. Since our resources are limited, we urge you to pursue these alternatives before coming to us with authentication requests.

Does the Internet Archive's affidavit mean that the printout was actually the page posted on the Web at the recorded time?

The Internet Archive's affidavit only affirms that the printed document is a true and correct copy of our records. It remains your burden to convince the finder of fact what pages were up when.

IA standard affidavit

...If a visitor clicks on a link on an archived page, the Wayback Machine will serve the archived file with the closest available date to the page upon which the link appeared and was clicked...

The archived data made viewable and browseable by the Wayback Machine is compiled using software programs known as crawlers that surf the Web and automatically store copies of website files, preserving these files as they exist at the point of time of capture.

...The date assigned by the Internet Archive applies to the HTML file but not to image files linked therein. Thus images that appear on the printed page may not have been archived on the same date as the HTML file...

Attached hereto as Exhibit A are true and accurate copies of printouts of the Internet Archive's records of the HTML files for the URLs and the dates specified in the footer of the printout.

why should we care?

- legal professionals are **our users, too**
- often, we have **unique historical data**
- help courts + juries **correctly interpret** web archive evidence, leading to **more informed outcomes**
- **broaden community of practice** by bringing in legal technology professionals
- continue to **mainstream web archives**

why might we hesitate?

- typical cases serve **private interests** rather than public goods
- **immature open source software culture** for legal technology(?)
- **market solutions** for web + social media archiving for litigation **already exist**



RELEVANT RULES

cases

use cases

- information on individual webpages, at a point in time
- information on individual webpages, over a period of time
- persistence of navigational paths, over a period of time

types of cases

- civil litigation
 - patent infringement
 - trademark infringement
 - copyright infringement
 - class actions
- patent inter partes review (IPR)
- criminal litigation?

authentication (FRE 901)

Wikipedia

- *“Authentication, in the law of evidence, is the process by which documentary evidence and other physical evidence is **proven to be genuine**, and not a forgery.”*

[Wikipedia: Authentication \(law\)](#)

FRE 901

- Authenticating or Identifying Evidence
 - a) In General. To satisfy the requirement of authenticating or identifying an item of evidence, the proponent must produce evidence sufficient to support a finding that the item is what the proponent claims it is.
 - b) Examples.
 - 1) Testimony of a Witness with Knowledge.
 - 3) Comparison by an Expert Witness...
 - 9) Evidence About a Process or System.

[Legal Information Institute: Rule 901. Authenticating or Identifying Evidence | Federal Rules of Evidence](#)

Telewizja Polska USA, Inc. v. Echostar Satellite Corp. (2004)

- trademark infringement, breach of contract
- IAWM evidence to show advertisement of partner business service after contract expiration

“Plaintiff has neither denied that the exhibit represents the contents of its website on the dates in question, nor come forward with its own evidence challenging the veracity of the exhibit. Under these circumstances, the Court is of the opinion that Ms. Davis' affidavit is sufficient to satisfy Rule 901's threshold requirement for admissibility. Plaintiff is free to raise its concerns regarding reliability with the jury.”

[Telewizja Polska USA, Inc. v. Echostar Satellite Corp.](#), No. 02 C 3293 (N.D. Ill., Jun. 3 2004)

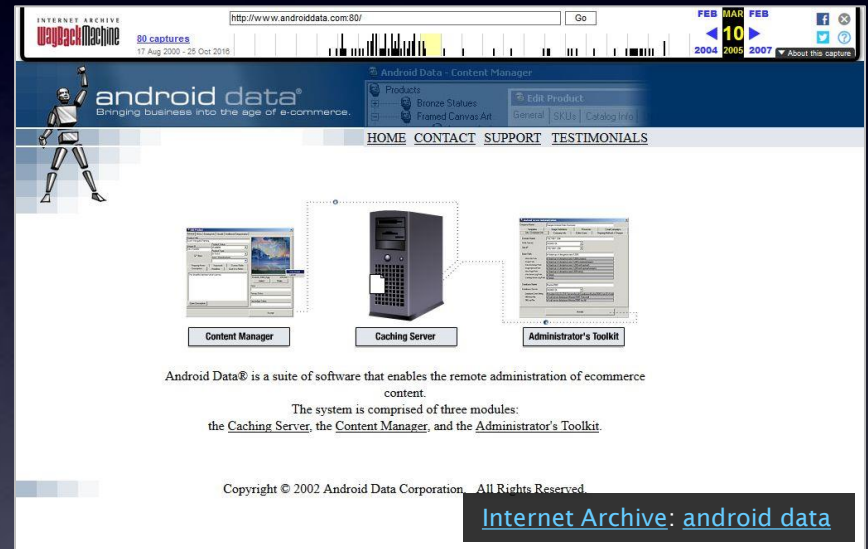


Specht v. Google, Inc. (2010)

- trademark infringement
- IAWM evidence to show ongoing use of mark over a period of time

“[T]he screen shots were not authenticated by an officer or employee of the Internet Archive, but rather through declarations of Specht...This is an improper method to authenticate screen shots from the Internet Archive...Because Plaintiffs did not properly authenticate them, the Court will not consider the Internet Archives printouts from Plaintiffs' Summary Judgment Exhibits”

[Specht v. Google, Inc., 758 F. Supp. 2d 570 \(N.D. Ill. Dec. 17, 2010\)](#)

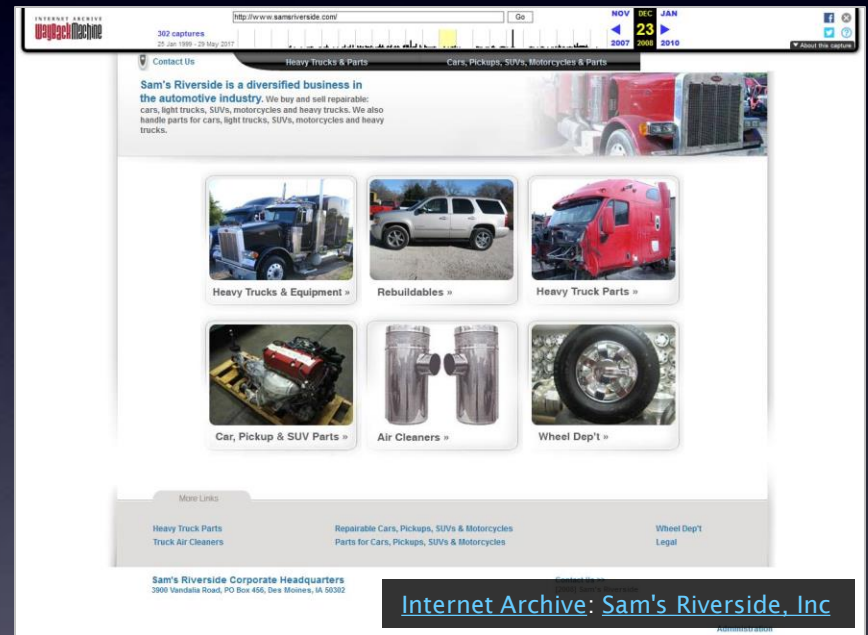


Sam's Riverside, Inc. v. Intercon Solutions, Inc. (2011)

- trademark infringement, cybersquatting
- IAWM evidence to show ongoing use of mark over a period of time

“Other courts have concluded that an affidavit from an Internet Archive employee is sufficient to authenticate screen shots taken from Archive.org...The Court finds these cases persuasive and, therefore, concludes that the Butler Affidavit is sufficient to authenticate the specific screen shots that are mentioned in and attached to the Butler Affidavit.”

[Sam's Riverside, Inc. v. Intercon Solutions, Inc.](#), 790 F. Supp. 2d 965 (S.D. Iowa 2011)



judicial notice (FRE 201)

Wikipedia

“Judicial notice is a rule in the law of evidence that allows a fact to be introduced into evidence if the truth of that fact is so notorious or well known, or so authoritatively attested, that it cannot reasonably be doubted...Facts and materials admitted under judicial notice are accepted without being formally introduced by a witness or other rule of evidence”

[Wikipedia: Judicial notice](#)

FRE 201

- Judicial Notice of Adjudicative Facts
 - b) Kinds of Facts That May Be Judicially Noticed. The court may judicially notice a fact that is not subject to reasonable dispute because it:
 - 2) can be accurately and readily determined from sources whose accuracy cannot reasonably be questioned.

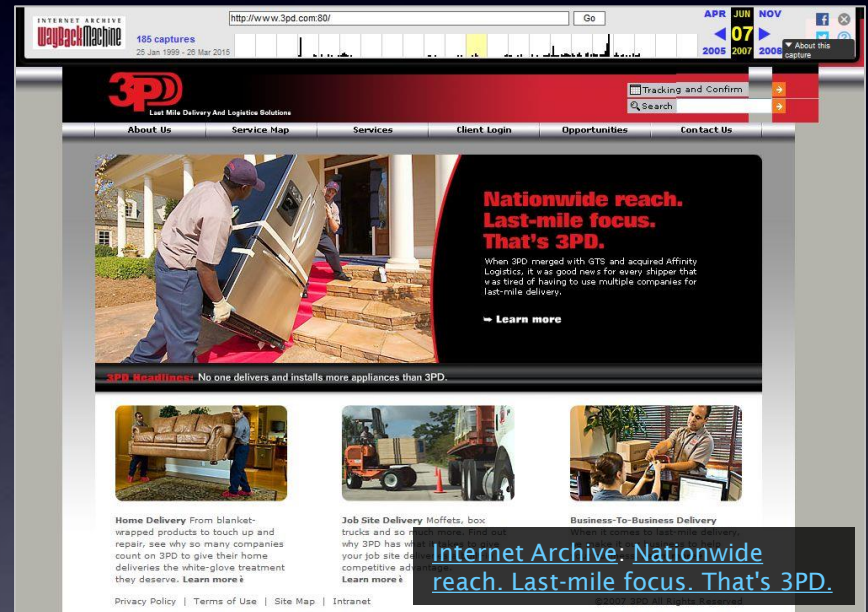
[Legal Information Institute: Rule 201. Judicial Notice of Adjudicative Facts | Federal Rules of Evidence](#)

Martins v. 3PD, Inc. (2013)

- employment law, class action
- IAWM evidence to show scope of business services over a period of time

“In addition to the historical version of the 3PD website attached to Mr. Rabieh's Affidavits dated October 23, 2012, I take judicial notice of the various historical versions of the 3PD website available on the Internet Archive at Archive.org as facts readily determinable by resort to a source whose accuracy cannot reasonably be questioned.”

[Martins v. 3PD, Inc., No. 11 Civ. 11313, 2013 U.S. Dist. LEXIS 45753, 2013 WL 1320454, at *16 n.8 \(D. Mass. Mar. 28, 2013\)](#)

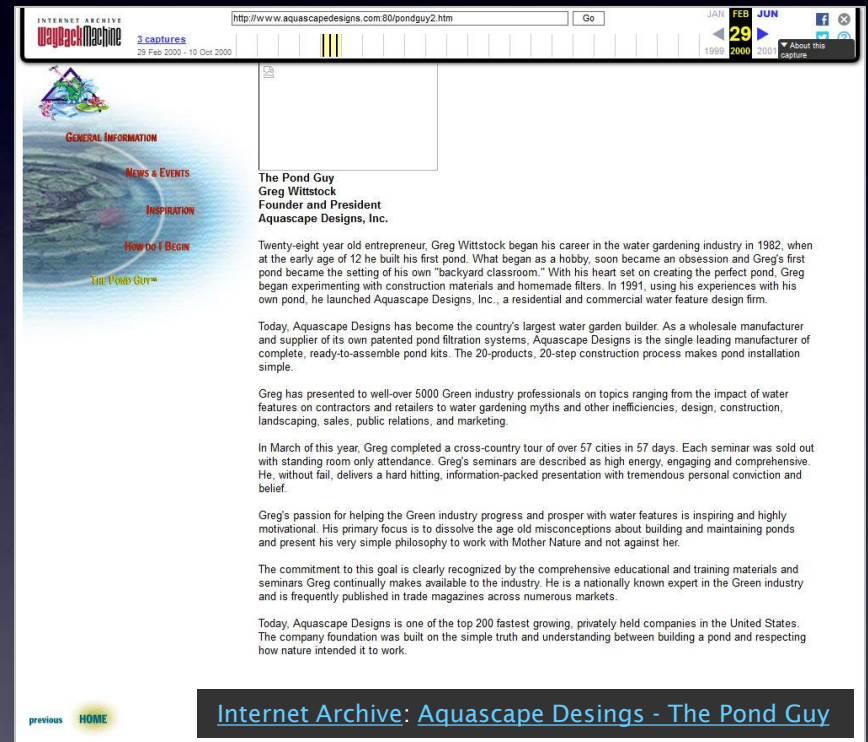


Pond Guy, Inc. v. Aquascape Designs, Inc. (2014)

- trademark infringement
- IAWM evidence to show earliest use of mark on a website

“Neither party...has submitted sufficient evidence to the Court detailing exactly what their historical internet presence consisted of. Seeing as this is a key issue in dispute, the Court turns to the Internet Archive, found at <https://archive.org/web/>, for the taking of judicial notice. As a resource the accuracy of which cannot reasonably be questioned, the Internet Archive has been found to be an acceptable source for the taking of judicial notice.”

[Pond Guy, Inc. v. Aquascape Designs, Inc., 2014 WL 2863871, *4 \(E.D.Mich. June 24, 2014\)](#)



Tompkins v. 23andMe, Inc. (2014)

- false advertising, consumer protection, class action
- IAWM evidence to show terms of service at point in time

“The parties do not dispute that the key portions of the website have not changed since the relevant times when Plaintiffs allegedly performed the transactions at issue. 23andMe relies on excerpts from a February 2014 version of the website...while Plaintiffs use excerpts dated April 2014... However, the Court takes judicial notice of the Internet Archive (<http://archive.org>) version of 23andMe's website as of November 20, 2013, the full version of the website archived right before the FDA warning letter of November 22, 2013”

Tompkins v. 23andMe, Inc., 2014 U.S. Dist. LEXIS 88068 (N.D. Cal. June 25, 2014)



Internet Archive: [23AndMe - Genetic Testing for Health, Disease & Ancestry; DNA Test](#)

expert witnesses (FRE 702)

Wikipedia

- *“An expert witness, in England, Wales and the United States, is a person whose opinion by virtue of education, training, certification, skills or experience, is accepted by the judge as an expert.”*

Wikipedia: [Expert witness](#)

FRE 702

- Testimony by Expert Witnesses

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:

- a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
- b) the testimony is based on sufficient facts or data;
- c) the testimony is the product of reliable principles and methods; and
- d) the expert has reliably applied the principles and methods to the facts of the case.

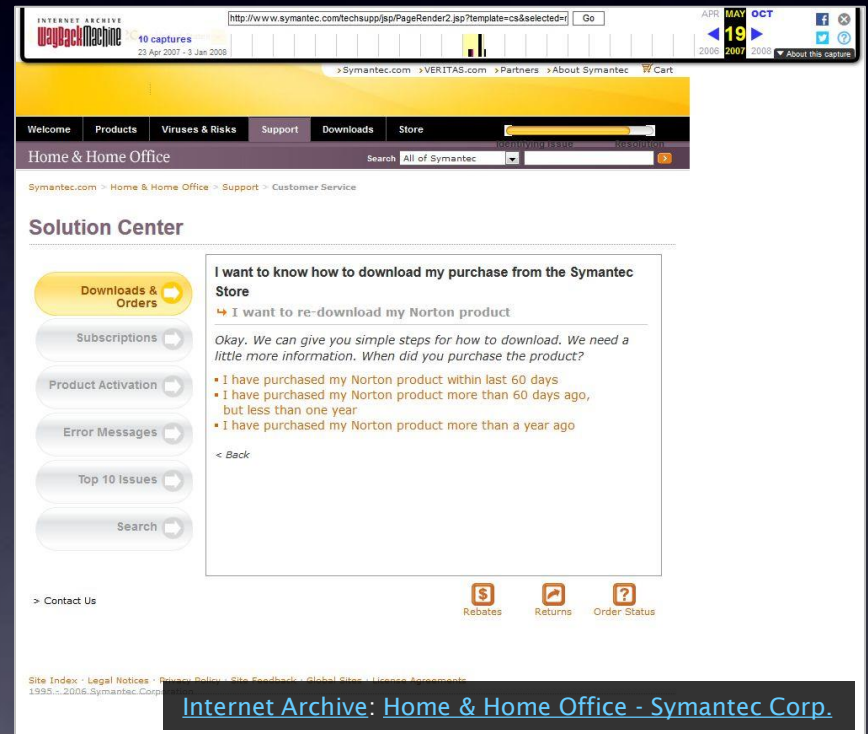
Legal Information Institute: [Rule 702. Testimony by Expert Witnesses](#) | Federal Rules of Evidence

Khoday v. Symantec Corp., et al (2015)

- consumer protection, class action
- IAWM evidence to show probable navigation paths over period of time

“Expert testimony that merely repeats information capable of easy comprehension by a jury is excludable...The Court finds that Taylor offers conclusions not readily available to the jury without the assistance of expert testimony. Whether legitimate alternatives for redownloading Norton products were available, at no cost, to customers during the relevant time period is central to the Plaintiffs' claims, making Taylor's proffered testimony highly relevant.”

[Khoday et al v. Symantec Corp. et al, No. 0:2011cv00180 - Document 372 \(D. Minn. 2015\)](#)



[Internet Archive: Home & Home Office - Symantec Corp.](#)



RELIABILITY FACTORS

"Contraption - Explored" by [Clint Budd](#) under [CC BY 2.0](#)

reliability factors in cases

raised as concerns

- IAWM disclaimer
- incompleteness
- provenance
- temporal coherence
(discrepant embedded
memento datetimes)

no examples(?) so far

- discreteness
- temporal coherence
(considering also
original HTTP headers)
- canonicity
- client artifacts

Nassar v. Nassar (2017)

- defamation
- IAWM evidence to show presence of defamatory information at point in time

“[T]he organization that maintains waybackmachine.org itself disclaims any guarantee that the results it produces are accurate. See Internet Archive Wayback Machine, Internet Archive's Terms of Use, Privacy Policy, and Copyright Policy... (“You understand and agree that the Archive makes no warranty or representation regarding the accuracy, currency, completeness, reliability, or usefulness of the content in the Collections.”). In light of that, and because Plaintiff otherwise has made no showing that the accuracy of the Internet archive cannot reasonably be questioned, judicial notice of the historical contents of the websites is inappropriate.”

[Nassar v. Nassar, 2017 U.S. Dist. LEXIS 456 \(M.D. Fla. Jan. 3, 2017\)](#)

Internet Archive
waybackmachine

1 capture
5 Jun 2011

http://www.rosananassar.com/50/

Go

MAY 10 2011

05:00

2000 2010 2011

Internet Archive

RosanaNassar

A real história por trás do abuso do poder

- Home
- Problemas com familiares
- Problemas Profissionais

Quem é realmente rosana nassar ?

Por trás de um jeito polido, se esconde uma mente doente

Conheço a família Nassar já há vários anos. É uma família virtuosa, bonita, unida e decente... Qual não foi o meu espanto quando soube de uma publicação que teria sido feita por Rosana Nassar, uma pessoa que teve todas as possibilidades de estudar, passar por um processo de graduação, teve todo auxílio dos familiares em seu processo de crescimento pessoal, mas que em dado momento de sua vida, optou por destruir suas origens, optou por difamar uma história tão bonita como é a dessa família tão bem quista em nossa cidade! Fico pensando o que aconteceu para que essa mulher resolvesse sem **nenhum fundamento real** caluniar de forma tão descarada pessoas que outrora foram vitais para ela. Uma pessoa como essa, ao meu ver, deveria no mínimo passar por um **sério tratamento psicológico** para expurgar esses sentimentos nocivos.

Li alguns trechos do livro e qualquer pessoa em sã consciência vê que aquilo não se trata de um relato real, mas sim de uma fantasia criada por um ser afetado por um **histórico crítico**, fato pelo qual foi banido das lojas em Belém! E aí ponto para as pessoas de bom senso! Para se ter uma ideia de onde uma mente psicótica pode chegar, Rosana Nassar criou uma página web de uma editora para realizar a venda desse livro sobre o pretexto de assegurar publicações baratas para profissionais que estavam começando. Realizei várias buscas na internet e encontrei várias informações evasivas sobre essa "editora" criada por ela, inclusive com vários nomes diferentes sendo um deles **"NEW GLOBAL PUBLISHING"**.

Rosana Nassar Zolin é uma pessoa que tem **graves problemas psicológicos**, uma pessoa **extremamente agressiva**, com um **sério desvio de personalidade**, que não fala há vários anos com a mãe e os irmãos. Teve sérios **problemas e insucessos profissionais** em vários lugares que trabalhou devido sua **agressividade e comportamento psicótico**. Teve sérios problemas emocionais e fez consultas psiquiátricas em Belém. Em seu histórico psiquiátrico familiar teve o pai e tias acometidos por problemas psiquiátricos, o que pode auxiliar no entendimento do porque ela está cometendo tais atos, porém em nenhum momento justificar os mesmos. Pois como psicóloga que se diz (e não sou sabedor se isso é real ou mais uma invenção de sua mente conturbada) deveria saber que o caminho real de sua libertação seria pela ajuda profissional e não por um **legado maldito** que está criando para si e para seus familiares.

Caros leitores, estou colocando aqui o meu testemunho do que a família de Rosana Zolin está passando, como amigo e conhecedor do problema, muitos familiares dela receberam e-mails escabrosos nas últimas semanas, fiquei tão revoltado que resolvi coletar dados dos familiares e deixá-los públicos como forma de tentar criar um local que desse uma resposta definitiva à essa farsa doentia!

-
- **Rosana Nassar Zolin**

Precisou lançar nos Estados Unidos seu livro **"O poder da libertação pela voz"**, pois o livro foi banido das livrarias

- **Informações**
- [O poder da libertação pela voz](#)
- [Sumário Crítico acerca do livro](#)
- [Quem é Rosana Nassar](#)
- [Problemas com o irmão mais velho](#)
- [Problemas com a mãe](#)
- [Problemas com a terceira irmã](#)
- [Problemas com o terceiro irmão](#)
- [Problemas com a irmã caçula](#)
- [Problemas profissionais](#)
- **Links**
- [New Global Publishing](#)

rosananassar.com é um site produzido com o Internet Archive: Rosana Nassar Zolin

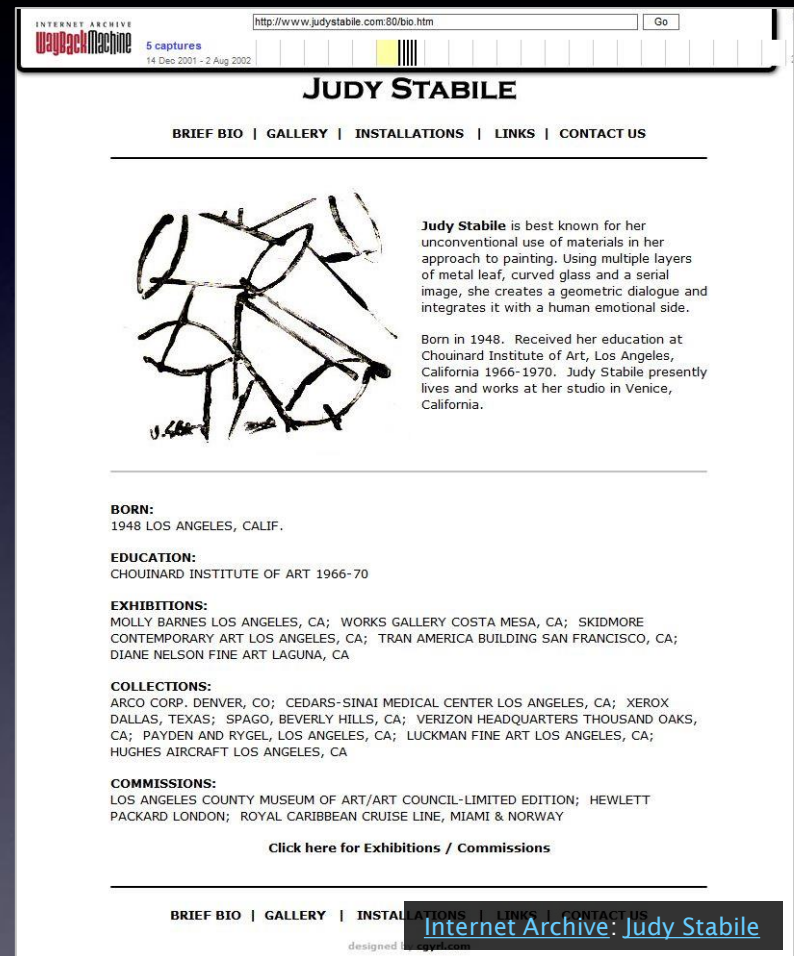
Internet Archive: Rosana Nassar Zolin

Stabile v. Paul Smith Ltd. (2015)

- copyright infringement
- IAWM evidence to show absence of particular image over period of time

“Stabile also objects on the ground that the Internet pages shown are not the full captures of the website, but only isolated pages. (Id.) The captures from the Wayback Machine will not be considered conclusive evidence of what was or was not on Stabile's entire website between 2001 and 2011, but will be admitted as support for the contention that there is no evidence beyond Stabile's deposition statement that Extrapolations # 3 was displayed on her website at all, and that there is no evidence that it was displayed during the relevant time period.”

[Stabile v. Paul Smith Ltd., 2015 U.S. Dist. LEXIS 101291 \(C.D. Cal. July 31, 2015\)](#)

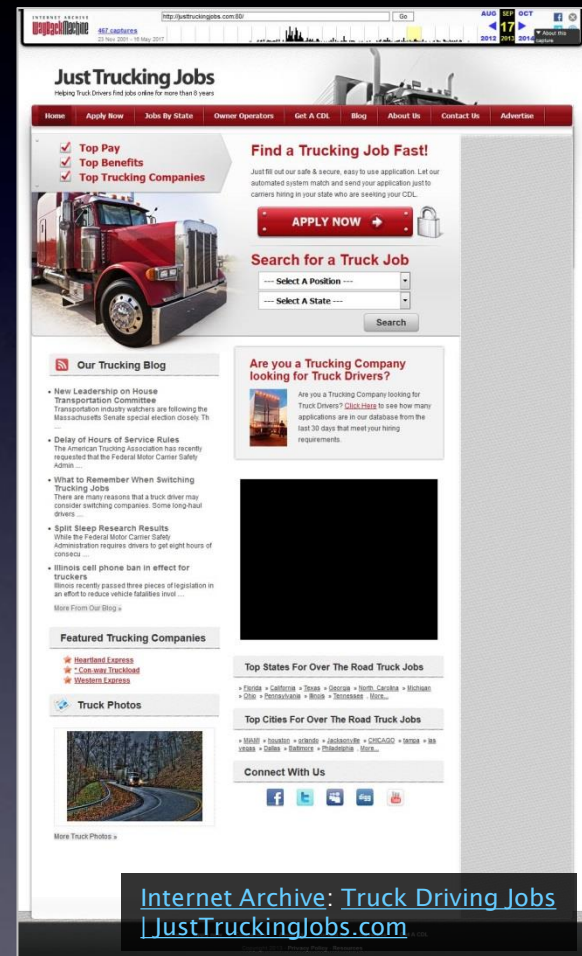


Marten Transport, Ltd. v. PlattForm Advertising, Inc. (2016)

- trademark infringement
- IAWM evidence to show ongoing use of mark over period of time

“[T]he fact that the Wayback Machine doesn't capture everything that was on those sites does not bear on whether the things that were captured were in fact on those sites. There is no suggestion or evidence from PlattForm that the Wayback Machine ever adds material to sites (other than a Wayback Machine toolbar and coding that allows links to work).”

Marten Transport, Ltd v PlattForm Advertising, Inc.,
2016 U.S. Dist. LEXIS 57471 (D. Kan. Apr. 29, 2016)



Internet Archive: Truck Driving Jobs
| JustTruckingJobs.com

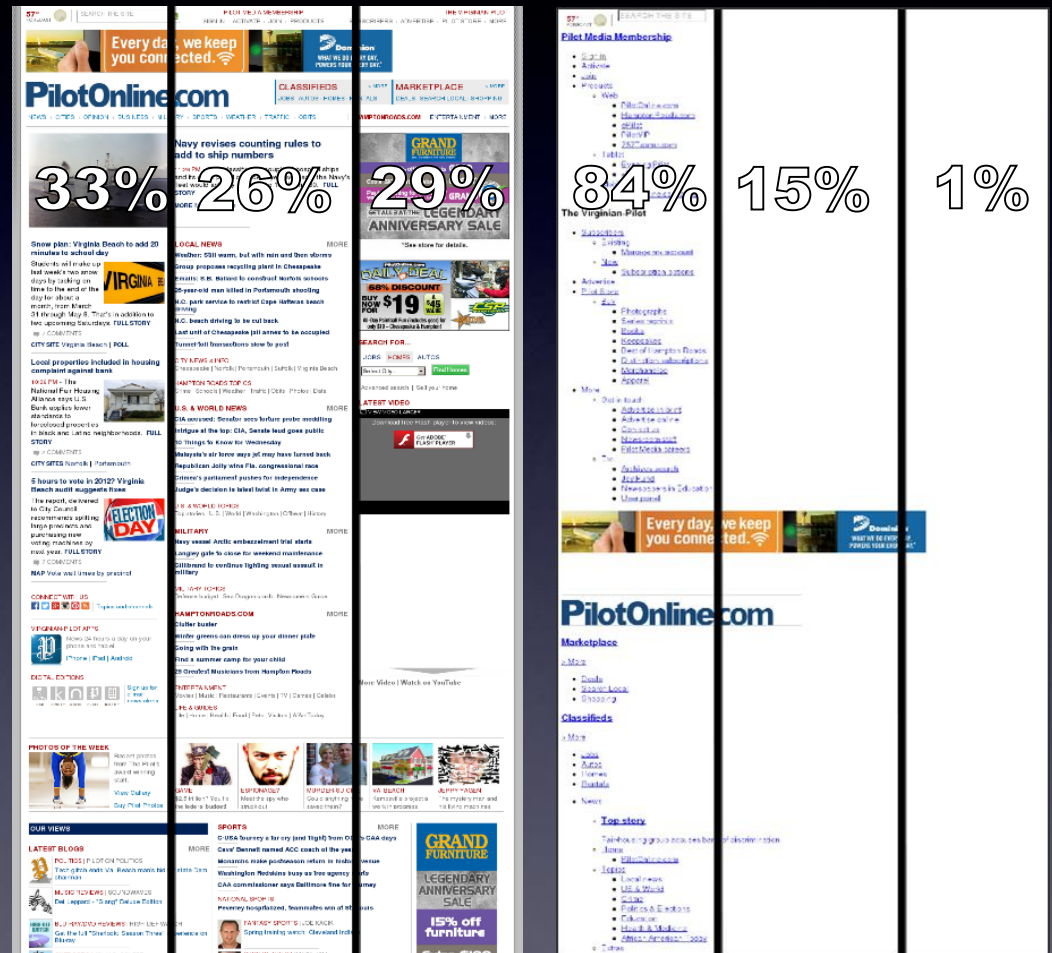
Marten Transport, Ltd. v. PlattForm Advertising, Inc. (2016)

- objections to evidence admissibility:
 - any of 3 crawlers may have retrieved page
 - images sometimes missing
 - crawlers can't capture some content
 - IA doesn't guarantee accuracy
 - affiant has not prepared a crawl

[Marten Transport, Ltd v PlattForm Advertising, Inc.,
2016 U.S. Dist. LEXIS 57471 \(D. Kan. Apr. 29, 2016\)](#)

quantifying incompleteness

- `` + `<embed>` leave hints about size + centrality
- for CSS, look at distribution of background color
- missing resources connote unreliability
- materiality of missing resources subject to interpretation



Justin F. Brunelle et al: "Not all mementos are created equal: measuring the impact of missing resources"

live site “leakage” via AJAX

INTERNET ARCHIVE
Wayback Machine
BETA

http://www.cnn.com/

Go

JUL
2007

SEP
3
2008

OCT
2009

Close X

15,098 captures
15 Aug 00 - 29 Jul 11

Help ?

CNN.com

Web | CNN News | CNN Videos

SEARCH

POWERED BY Google

HOME

WORLD

U.S.

POLITICS

CRIME

ENTERTAINMENT

HEALTH

TECH

TRAVEL

LIVING

BUSINESS

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TIME.COM

VIDEO

IREPORT

IMPACT

Hot Topics » Hurricane Gustav • Conventions • Sarah Palin • more topics »

Edition: International | Set Pref

updated 4:24 p.m. EDT, Wed September 3, 2008

Make CNN Your Home Page

Republican National Convention 2008



Palin's path from city hall to governor's mansion

When she played basketball in high school, Sarah Palin, the soon-to-be Republican vice presidential nominee, earned the nickname "Sarah Barracuda" for her fierce competitiveness. In the 21 months she has served as governor of Alaska, no one is suggesting she's lost her fighting edge. full story

- Palin ready to lead? | Analysts: Her task
- Palin to call for reform in RNC speech
- Will her gender sway women to Palin?

Latest News

- Poll measures race in three key states 19 min
- Dems blast Lieberman, say he lied to delegates
- Ticker: McCain greets Palin's daughter, fiancé
- Martin: Keep politics out of Bristol Palin issue
- Biographer: America, meet Sarah Palin
- iReport.com: Can a mom of 5 be VP?
- Cafferty: Should McCain consider different VP?
- CNNMoney: Auto sales plunge
- Gunman's bloody trail leads to six bodies
- Caylee's grandma disputes evidence
- Nagin: Residents won't be turned away
- CNNMoney: Gulf oil production scrambling back
- Hanna roams Caribbean, may hit U.S.
- Pakistan protests 'coalition air attack'
- The cartoonist beloved by GIs and regular guys
- 8 dogs die in hot truck during lunch break
- Review: Google's Chrome needs more polish
- New Marilyn Monroe film scenes found
- Beyonce's sister aims for a path of her own
- CNN Wire: Paraguay coup plot alleged

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Republican National Convention »

- Bernstein: Democrats better take note
- Bush, McCain still an uneasy alliance
- Interactive: How conventions work
- McCain arrives in Minnesota for convention
- Key players | Trivia | The Forum | In Depth

Video »



Gustav recovery briefing
LIVE



Dogs die during lunch break 1:39



The RNC in St. Paul
LIVE

LIVE: Watch coverage of the RNC & Tropical Storm Hanna

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Palin in Minnesota

Justin F. Brunelle: "Zombies in the Archives" Secrets to a healthy heart

Internet Archive: CNN.com

live site “leakage” via AJAX

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Wayback Machine
BETA

http://www.cnn.com/

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SEARCH

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VIDEO IREPORT IMPACT

Hot Topics » Hurricane Gustav • Conventions • Sarah Palin • more topics »

Edition: International | Set Pref

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Viewer's Guide

Video »



Gustav recovery briefing
LIVE



Dogs die during lunch break 1:39



The RNC in St. Paul
LIVE

LIVE: Watch coverage of the RNC & Tropical Storm Hanna

FIRST
PRESIDENTIAL DEBATE
OBAMA | ROMNEY



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Palin in Minnesota

Justin F. Brunelle: “Zombies in the Archives”

Internet Archive: CNN.com

temporal coherence

Internet Archive Wayback Machine

https://web.archive.org/web/20041209190926/http://www.wunderground.com/cgi-bin/

21 captures 27 Oct 02 - 25 Jan 11

Go

AUG DEC MAR Close X

2003 2004 2006 Help ?

Find the weather for any City, State or ZIP Code, or Airport Code or Country

Link to Wunder Photos

wunderground.com PDA/Mobile

Features: Wunder Photos NEXRAD radar Regional Radar NEW Zoom Satellite Maps Trip Planner

Tropical / Hurricane Marine Severe Astronomy Ski Education Favorites Personal Weather Stations

Member Benefits: No Ads Weather Email \$5 a year Signup Here

Email

Password

Login

Print This Page

Maps

Temperature

Heat Index

Local Radar

Regional Radar

Varina, Iowa

Add this page to your Favorites Weather Email

Local Time: 1:09 PM CST Set My Timezone Lat/Lon: 42.6° N 94.8° W | MSN Map

Current Conditions

Updated: 12:55 PM CST on December 09, 2004

Observed at Storm Lake, Iowa (History)

Elevation: 1486 ft / 453 m

41°F / 5°C

Light Drizzle

Windchill: 37°F / 3°C






Humidity: 100%

Dew Point: 41°F / 5°C

Wind: 6 mph / 9 km/h from

36 in / 1001 hPa

5-Day Forecast for ZIP Code 50593

Thu	Fri	Sat	Sun	Mon
				
43° 29°	36° 22°	47° 34°	41° 15°	31° 15°
Chance of Rain	Mostly Cloudy	Mostly Cloudy	Partly Cloudy	Partly Cloudy
Detail	Detail	Detail	Detail	Detail

Click **Detail** for hourly wind, temperature, humidity and UV forecasts.

Alternate Computer Forecast: [AVN MOS Weather Graph](#) | [Local Allergy Info from Pollen.com](#)

Find a Hotel Wunder Photos

Internet Archive: Weather Underground: Varina, Iowa Forecast

Scott G. Ainsworth et al: "Only One Out of Five Archived Web Pages Existed as Presented"

temporal coherence

Internet Archive Wayback Machine

https://web.archive.org/web/20041209190926/http://www.wunderground.com/cgi-bin/

21 captures 27 Oct 02 - 25 Jan 11

Find the weather for any City, State or ZIP Code, or Airport Code or Country

missing

-15 hours

Member Benefits:
No Ads
Weather Email
\$5 a year
Signup Here

Email
Password
Login

Print This Page

Maps
Temperature
Heat Index

Varina, Iowa

Local Time: 1:09 PM CST Set My Timezone Lat/Lon: 42.6° N 94.8° W | MSN Map

Current Conditions

Updated: 12:55 PM CST on December 09, 2004
Observed at Storm Lake, Iowa (History)
Elevation: 1486 ft / 453 m

41 °F / 5 °C
Light Drizzle

Windchill: 37 °F / 3 °C
Humidity: 100%
Dew Point: 41 °F / 5 °C
Wind: 6 mph / 9 km/h from

5-Day Forecast for ZIP Code 50593

Thu	Fri	Sat	Sun	Mon
43° 29°	36° 21°	36° 21°	15°	31° 15°
Chance of Rain	Mostly Cloudy	Mostly Cloudy	Cloudy	Partly Cloudy
Detail	Detail	Detail	Detail	Detail

Click **Detail** for hourly wind, temperature, humidity and UV forecasts.

Alternate Computer Forecast: [AVN MOS Weather Graph](#) | [Local Allergy Info from Pollen.com](#)

Find a Hotel Wunder Photos

+9 hours

+9 months

Internet Archive: Weather Underground: Varina, Iowa Forecast

Scott G. Ainsworth et al: "Only One Out of Five Archived Web Pages Existed as Presented"

visualizing temporal coherence

Time Travel

http://stanford.edu

2010-04-28 10:34:32 Find Reconstruct 2010-04-27 16:17:59 GMT

4 months before 12 days before a day before 3 hours before 17 minutes before 2 minutes before 9 seconds before 2010-04-28 10:34:32

wayback.archive-it.org (39) web.archive.org (2) wayback.velfsfn.is (3)

The page below assembled using 44 Mementos from 3 archives, spanning a year

STANFORD UNIVERSITY

Maps A-Z Index Search...

About Stanford Admission Academics Research Life On Campus

Show Expanded Menus

Stanford scenes

EVENTS

APR 27 Panel: SEC v. Goldman Sachs 5 p.m.
Hal Holbrook: Mark Twain Tonight! 8 p.m.

APR 28 Wellness Fair 10 a.m.

APR 30 Conference: The Future of Journalism

UNIVERSITY NEWS

Admit Weekend 2010
Campus rolls out the Cardinal carpet for more than 1,300 prospective freshmen and their families.

Ash and aircraft
Danger to airliners from volcano's debris is difficult to assess, Stanford expert says.

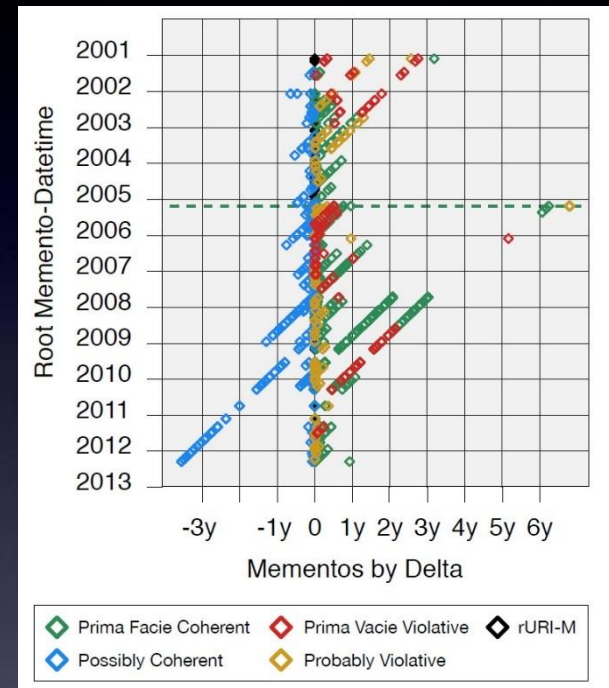
Researcher: Indoor air may be hazardous to women's health
Stanford star Toby Gerhart picked by Minnesota Vikings

Gateways for...
Students
Faculty & Staff
Alumni
Parents
Visitors & Neighbors

TOP DESTINATIONS

SCHOOLS

Time Travel: Stanford University

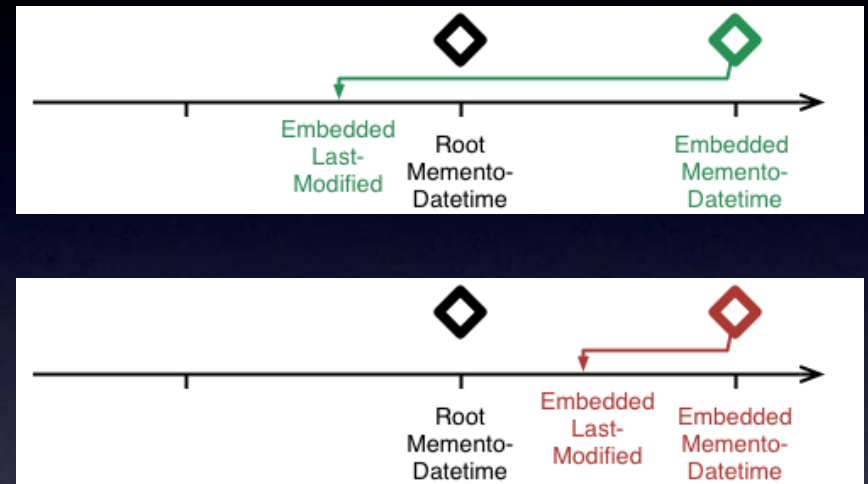


Scott Ainsworth et al: "Only One Out of Five Archived Web Pages Existed as Presented"

again, the materiality of temporal incoherence is subject to interpretation

other datetime estimation strategies

- [Carbon Dating](#) (+ constituent services)
- comparing X-Archive-Orig-last-modified w/ Memento datetime
- contemporaneous inlinks via IAWM beta search



Scott G. Ainsworth: [“Evaluating the Temporal Coherence of Composite Mementos”](#)

interpreting datetimes

- static datetime in text of archived webpage
- Memento datetime
- X-Archive-Orig-last-modified
- datetimes of root vs. embedded mementos
- datetimes of contiguously-navigable mementos
- effect of crawl deduplication on memento datetimes



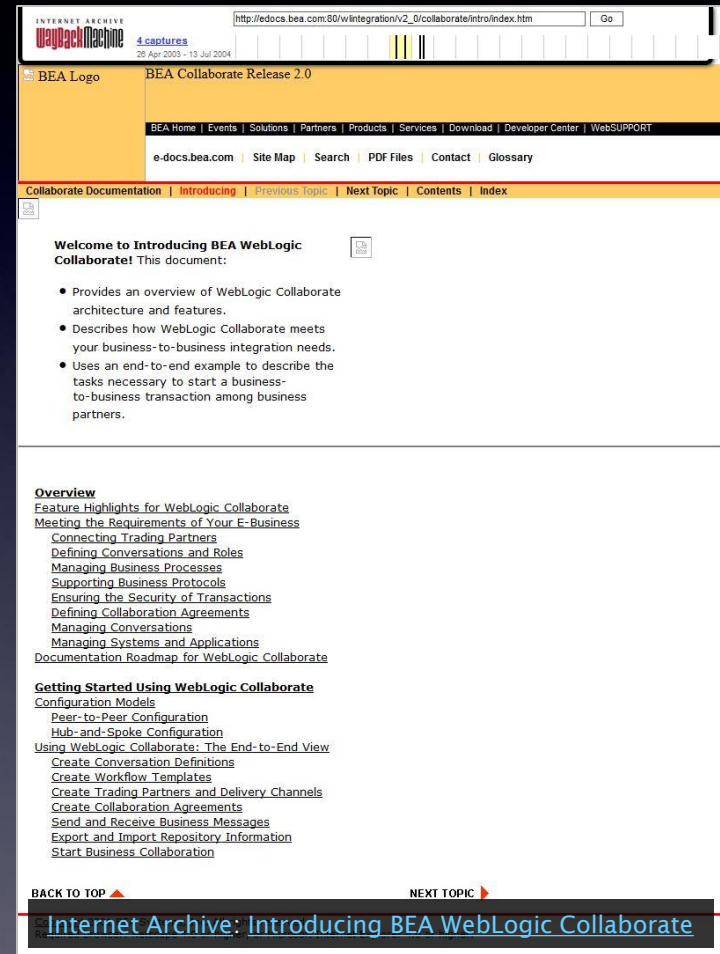
"Dali Time" by PhotoAteller under [CC BY 2.0](#)

Servicenow, Inc. v. Hewlett-Packard Co. (2015)

- inter pares review
- IAWM evidence to show presence of prior art

“Initially, we note that, even relying on Exhibit A to the Butler Affidavit, the webpage for the Introducing Collaborate Reference was archived on November 1, 2002, less than one year prior to the May 14, 2003 filing date of the ’981 patent and, thus, fails to qualify as a prior-art, printed publication under 35 U.S.C. § 102(b)”

[Servicenow, Inc. v. Hewlett-Packard Co., Case IPR2015-00707, slip op. at 5-18 \(PTAB August 26, 2015\)](#)

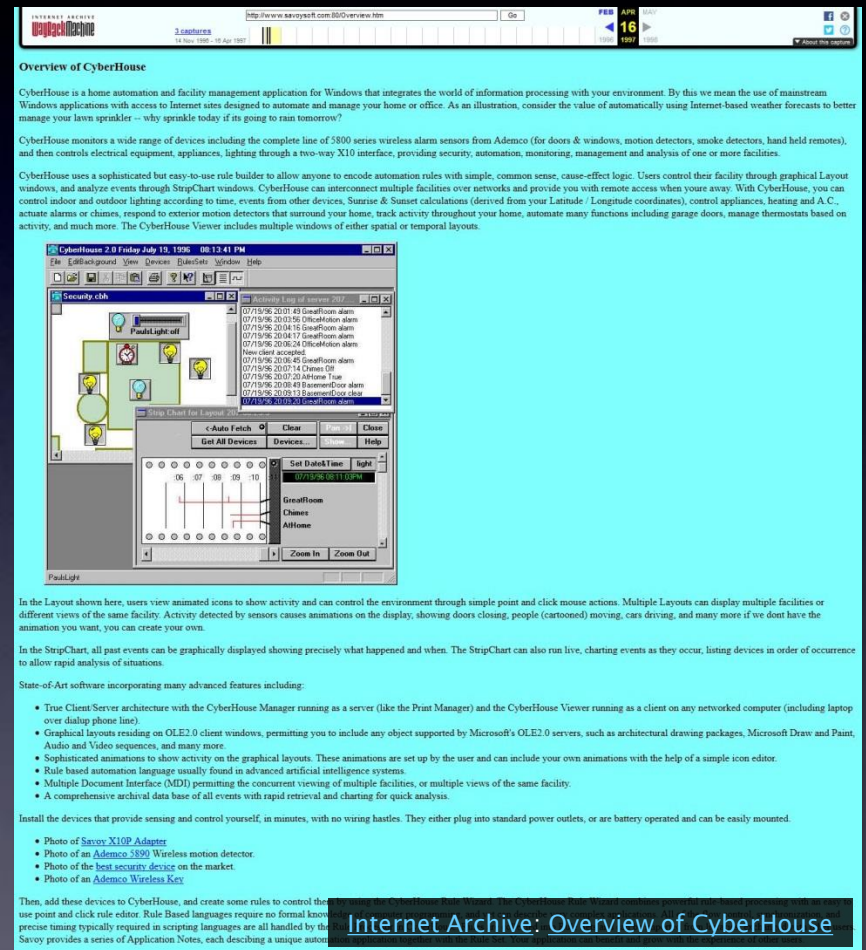


Crestron Electronics, Inc. v. Intuitive Building Controls, Inc. (2016)

- inter pares review
- IAWM evidence to show prior art

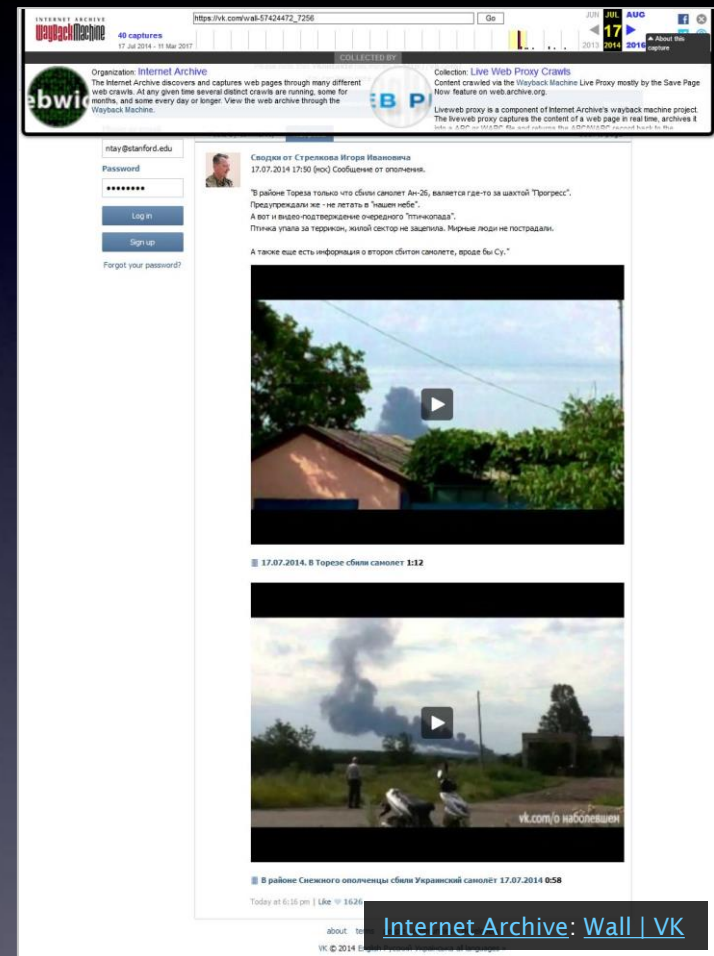
“Although Patent Owner is correct that the Butler Affidavit asserts that embedded images may not be archived on the same date as the web page that embeds the image, Mr. Butler does not state that such embedded images cannot be archived on the same date. Thus, we have no evidence on this record that the specific web pages produced in Exhibit 1002 do not in fact include the embedded images, as asserted by Patent Owner.”

Crestron Electronics, Inc. v. Intuitive Building Controls, Inc.,
Case IPR2015-01460, slip op. at 12-22 (PTAB Jan. 14, 2016)




IAWM provenance

- IAWM sources:
 - [web-wide crawls](#)
 - [contract crawls](#)
 - [Archive-It crawls](#)
 - [Alexa donations](#)
 - [ArchiveTeam crawls](#)
 - [Save Page Now](#)
- how does mixed provenance affect acceptance of reliability assertions?



other web archive repositories


STANFORD UNIVERSITY LIBRARIES
Feedback

Stanford Web Archive Portal
A searchable collection of websites archived by Stanford University

University of North Texas Libraries


CyberCemetery
University of North Texas Libraries

[CyberCemetery Home](#)

[Latest Instances](#) | [Translate to Welsh](#)

You are here: [Home](#)

Provided by

BRITISH LIBRARY

- [Home](#)
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- [Browse the archive](#)
- [Visualisation](#)
- [Memorabilia](#)
- [Nominate a site](#)
- [FAQs](#)
- [Technical information](#)
- [Archive statistics](#)
- [UK Web Archive Blog](#)
- [Contact](#)

Welcome to the UK Web Archive

Thousands of UK websites have been collected since 2004 and the Archive is growing fast.

Here you can see how sites have changed over time, locate information no longer available on the live Web and observe the unfolding history of a spectrum of UK activities represented online. Sites that no longer exist elsewhere are found here and those yet to be archived can be saved for the future by nominating them.

The Archive contains sites that reflect the rich diversity of lives and interests throughout the UK. Search is by Title of Website, Full Text or URL, or browse by Subject, Special Collection or Alphabetical List.

Cookies on the UK Web Archive website

We use cookies to ensure that we give you the best experience on our website. If you continue without changing your settings, we'll assume that you are happy to receive all cookies on the UK Web Archive website. [Click here for more information.](#)

Quick links

- [What is the UK Web Archive?](#)
- [Who is the UK Web Archive for?](#)
- [How do I search the archive?](#)
- [How can I nominate a website?](#)
- [Videos: An Introduction to the UK Web Archive \(7 minutes\).](#)

Quick search

☐ Full text (across all the archived websites)
 ☒ Title (for a specific archived website)

Advanced search

Explore the Special Collections

Special Collections are groups of websites brought together on a particular theme by librarians, curators and other specialists, often working in collaboration with key organisations in the field. They can be events-based (e.g. The Olympic & Paralympic Games 2012), topical (e.g. The Credit Crunch Collection) or subject-oriented (e.g. The British Countryside Collections).

Blog

Credit Crunch

Live Art

London Terrorist Att...

Olympic & Paralympic...

Browse by Subject

- Arts & Humanities
- Business, Economy & Industry
- Education & Research
- Government, Law & Politics
- Medicine & Health
- Science & Technology
- Society & Culture

[Browse by Subject](#)

Initiated by:

Personal Experiences...

Quakers

Queen's Diamond Jub...

UK General Election...

UK General Election...

[Browse Special Collections](#)

Visualisations

Norram Search

[Notice and takedown](#)

archive of government websites that have ceased operation (usually websites of defunct commissions that have issued a final report). This collection features a variety of topics indicative of current information. In particular, this collection features websites that cover topics supporting the program strengths.

CyberCemetery?

[xas Libraries](#) and the [U.S. Government Printing Office](#), as part of the Federal Depository Library ship to provide permanent public access to the Web sites and publications of defunct U.S. commissions. This collection was named the "CyberCemetery" by early users of the site.

the mission of the UNT Libraries by acquiring, preserving, and providing access to recorded government websites.

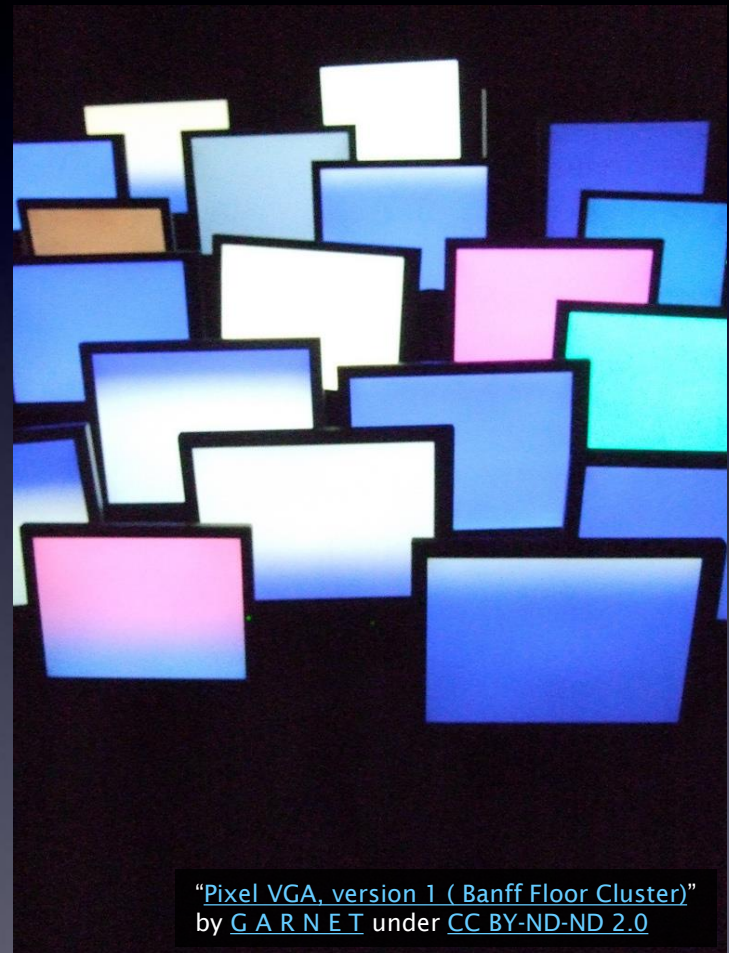
[Cyemetery](#) | [Related Resources](#) | [Contact Us](#) | [Digital Library](#) | [Cyemetery Information](#)
[Injection](#) | [UNT Libraries](#) | [UNT](#)
[CyberCyemetery Home](#)

arr Hoffman, and was last updated on February 02, 2009.

The screenshot shows the SLAC home page from 1999. The page has a red header with the SLAC logo and navigation links. The main content area includes a large image of a particle detector, a sidebar with 'New Arrivals' and 'SLAC News', and a footer with contact information.

canonicity

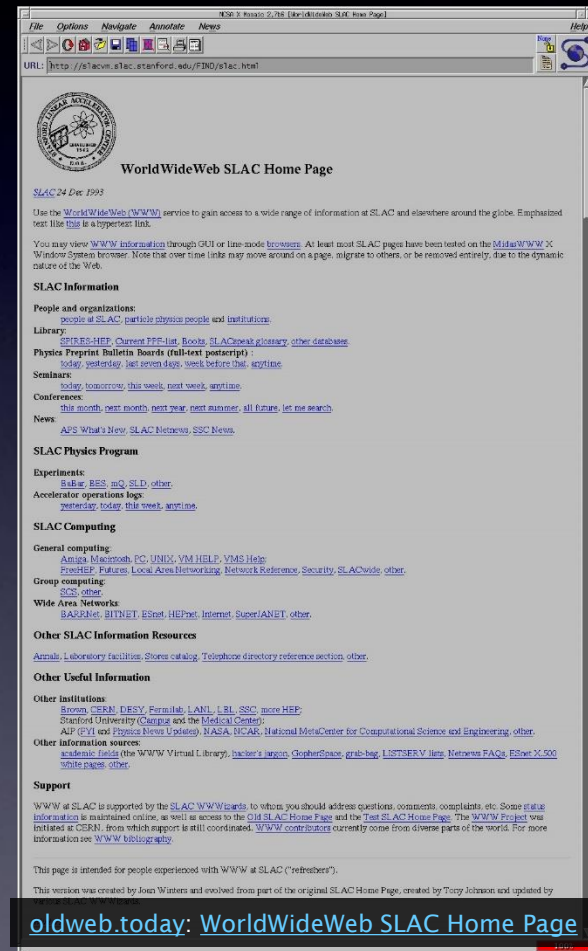
- personalization of content served to archival agent?
 - geoIP
 - user-agent
 - cookies
 - authentication
 - split testing



"Pixel VGA, version 1 (Banff Floor Cluster)"
by [GARNET](#) under [CC BY-ND-ND 2.0](#)

client artifacts

- access via contemporaneous browser/OS
- enable plugins (e.g., Flash)
- disable client-side utilities affecting presentation (e.g., adblocker)





WHAT NEXT?

[“Spiral Staircase - 11/52”](#) by [Phil Roeder](#) under [CC BY 2.0](#)

better serving legal (+ research?) use cases

- surface more provenance information
- improve interfaces to understand temporal coherence
 - toggle visibility of violative elements
- more broadly implement original HTTP header replay
- conduct more research on identifying personalized representations

discussion

- **why else might we care, or not, about legal use cases?**
- **what other reliability factors are relevant?**
 - what is the **relative importance** of different reliability factors?
 - **for what use cases** are different reliability factors relevant?
- how are web archives being used in litigation in **other jurisdictions?**
- **what else could we do to support legal use cases?**